

MARKH, A.T.; FEL'DMAN, A.L.; KAGAN, I.S.; LYASHCH, D.Yu.

Improving the quality of preserved cauliflower. Kons. i ov. prom.
14 no.9:15-17 S '59. (MIRA 12:12)

1.Odesskiy tekhnologicheskii institut pishchevoy i kholodil'noy
promyshlennosti (for Markh, Fel'dman). 2.Ukrainskiy nauchno-
issledovatel'skiy institut konservnoy promyshlennosti (for Kagan,
Lyashch).

(Cauliflower--Preservation)

PAN-YUNG, A.F. [Fang-Yung, A.F.]; KAGAN, I.S.; GRISHINA, I.P.; ZYABKO, L.P.

Removal of gas from semi-processed grape juice. Kons. i ov. pron.
14 no.11:30-33 N '59. (MIRA 13:2)

1.Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti.

(Grape juice)

KAGAN, I.S., LYASHCH, D. Yu.

Use of new equipment in the production of grape juice.
Kons.i ov.prom. 15 no.4:14-15 Ap '60. (MIRA 13:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy
promyshlennosti.
(Grape juice)

KACAN, I.S.

Improving the quality and assortment of canned foods, and specializing their production. Kons.i ov.prom. 15 no.8:4-5 Ag '60. (MIRA 13:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti.

(Food, Canned)

MEL'NICHENKO, Ye.L.; KAGAN, I.S.; GOL'DENBERG, M.Ya.; KAMNEVA, Z.P.;
SIZOVA, A.G.

Flow diagram of the manufacture of fruit juices. Kons.i ov.prom.
15 no.11:14-15 N '60. (MIRA 13:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promysh-
lennosti.

(Fruit juices)

KAGAN, I.S.; FAN-YUNG, A.F.

More about the deaeration of grape juice. Kons. i ov.prom. 17
no.4:13-14 Ap '62. (MIRA 15:3)

1. Odesskiy tekhnologicheskiy institut pishchevoy i kholodil'noy
promyshlennosti.

(Grape juice)

.. KAGAN, I.S.

"Sterilization of canned food" by S.M.IAstrebov, A.M.Masover.
Reviewed by I.S.Kagan. Kons. i ov.prom. 17 no.4:35-36 Ap '62.
(MIRA 15:3)
(Canning and preserving) (IAstrebov, S.M.) (Masover, A.M.)

KAGAN, I.S.; MARCHUK, L.I.

Canning unblanched peppers. Kons.i ov.prom. 17 no.6:17-19
Je '62. (MIRA 15:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy
promyshlennosti.

(Canning and preserving)
(Peppers)

GUSAROVA, Nadezhda Aleksandrovna; KAGAN, Isaak Samoylovich; KAMNEVA, Zoya Petrovna; MARCHUK, Lyubov' Ivanovna; MARKH, Zoya Aleksandrovna; SIZOVA, Aleksandra Grigor'yevna; SOLOV'YEVA, Yevgeniya Ivanovna; STEPANOVA, E.A., inzh., red.izd-va; STARODUB, T.A., tekhn. red.

[Home canning] Domashnee konservirovanie. 4., ispr. i dop. izd. Kiev, Gostekhzdat USSR, 1963. 207 p. (MIRA 16:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti.

(Canning and preserving)

CA

Required properties of fused joints for the steel 18-8.
K. V. Chukin and I. Z. Kagan. *Khim. Mashinostroyeniye*
1938, No. 8, 38-40; *Khim. Referat. Zhur.* 2, No. 5, 130
(1939). — 300 kinds of fused chem. app. were produced
from anticorrosion steel by the Sumskii machine-produc-
ing plant. The main grades of steel were EYaT and
EYaL with 0.005% of C. Conditions for fusion are given.
The fused samples were tested for intercryst. corrosion in
10% solns. of H_2SO_4 and $CuSO_4$ for 100 hrs. The tests
proved that the standards used and the method of fusion
were correct.
W. R. Hene

ASB-56A METALLURGICAL LITERATURE CLASSIFICATION

CA

The accepted standards in the construction of chemical apparatus. R. V. Chukin and I. Z. Kagan. *Angewandte Chemie* 1939, No. 1, 17-20; *Khim. Referat. Zhur.* 1939, No. 8, 131.—The 18-8 steels have good mech. properties and resistance to corrosion. The main defect of the high-alloy steels of this type is their tendency to intercryst. corrosion when heated to 400-600°, owing to the formation of complex Cr carbides depending on the content of C. With a content of C < 0.04% no intercryst. corrosion takes place. Such stabilizing substances as Ti and Nb are added to the 18-8 steel in order to prevent the formation of Cr carbides during welding. The empirical relationship for the addn. of Ti is $Ti = C \cdot 100$ (percentage of C = 0.03). Arc welding produced better results with the 18-8 steel than did gas welding. Standard requirements developed by the Franse plant for arc and gas welding are given. W. R. Hein

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX																									
<p>The welding of chemical apparatus from chromium steel. E. V. Chukin and I. Z. Kagan. <i>Antogennoe Delo</i> 1939, No. 5, 10-20; <i>Khim. Referat. Zhur.</i> 1939, No. 9, 121.</p> <p>Pipes made out of Cr steel PZh 17 (C \leq 0.12, Si 0.4-0.8, Mn 0.4-0.7, Cr 10.0-10.0, Ni \leq 0.5, S \leq 0.03, and P \leq 0.035%) can be arc-welded with electrodes coated with EYalT steel (C 0.09%). The welded seam is corrosion-resistant. The tech. conditions for welding are described and the results of tests for the mech. properties and lab. tests for corrosion are given. W. R. Hunt</p>																									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM: 57V-031VH</p> <p>147080 #2</p>																									

COMMON ELEMENTS		PROCESSING AND PROPERTIES INDEX	
C 4		<p>Welding of pig iron. I. Z. Kagan. <i>Khim. Mashinostroyeniya</i> 1939, No. 7, 27 R; <i>Khim. Referat. Zhur.</i> 1949, No. 3, 132.—Monel (Cu 32-3, Ni 63-5, Mn 1.0-1.5, Si 1.25-2.50%) is used for welding. Welding is possible for parts working at pressures of up to 4 atm. Pig-iron electrodes are used if the compn. of the upper layers of the welded metal must correspond strictly to that of pig iron. The compn. of pig-iron electrodes and their coating are given. Welding is carried out with charcoal at 350-400° with a uniform heating and cooling. Cu electrodes are used for unimportant parts.</p> <p>W. R. Henn</p>	
ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION			
GROUPS MAP ONLY ONE		GROUPS MAP ONLY ONE	

1ST AND 2ND CROSS
PROCESSES AND PROPERTIES INDEX

CA

Welding of high-grade apparatus. I. Z. Kagan. *Khim. Mashinostroyeniya* 1939, No. 7, 28; *Khim. Referat. Zhur.* 1940, No. 3, 122-3.—The thick coating of the electrodes must ensure the following properties of the welded metal: tensile strength ≥ 42 kg./sq. m., elongation $\leq 18\%$, joint resistance ≥ 8 kg./sq. cm. The paper describes pect resistance (from Ti ores) which can be used and a ilmenite coatings (from Ti ores) which can be used and a method for thermal treatment of ilmenite to decrease the S content, which has a harmful effect on the welded seam. The quality of the seam can be controlled by x-ray investigation. W. R. Henn

ASAC-55A METALLURGICAL LITERATURE CLASSIFICATION

1940000 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

MA

20

Improving Bronze Parts for Machines by Welding. I. Z. Kagan (*Khim. Mashinostroyeniya* (Chem. Plant Construction), 1959, (9), 24-26; *Khim. Zh. Inzh. Zhur.*, 1949, (9), 114; *C. Abstr.*, 1943, 37, 260).—(In Russian.) The best bronzes for chemical apparatus contain in addition to copper: (a) lead 5-7.5 and tin 8-10%, (b) lead 11-13 and tin 8-9%, (c) lead 7-8 and silicon 3-5-6%, (d) tin 8 and phosphorus up to 0.3%. Electric arc welding is used. The composition of the electrodes used (diameter 5-7 mm.) is: copper 84-6, lead 25-52, tin 6-23, zinc 1-03, nickel 0-22, phosphorus 0-01, and iron 0-27%. A porous weld is obtained if the content of lead in the electrodes is less than 20%. In some cases the objects must be heated to 640° C. and cooled in the air during 2 hrs.

19113

Welding of 18-8 Steel Containing Molybdenum. (In Russian.) I. Z. KAGAN. *Atmosfera Delo* (Welding), Jan. 1950, p. 17-18.

Effect of adding 2-4% Mo to 18-8 stainless was investigated, especially with respect to welding characteristics. Experimental data are tabulated

KAGAN, I. Z.

RYBASENKO, I.D.; YAKUBOVSKIY, L.A.; KAGAN, I.Z.; NEVSKIY, B.H., inzhener,
redaktor; MEDOVAR, B.I., kandidat tekhnicheskikh nauk, retsenezent;
BORT, M.M., inzhener, retsenezent; PRITSKER, G.S., tekhredaktor.

[Technology of making chemical apparatus of stainless steel] Tekhnolo-
logia izgotovleniia khimicheskoi apparatury iz nerzhaveiushchei stali.
Kiev, Gos.nauchno-tekhn.isd-vo mashinostroit. lit-ry, 1951, 145 p.
[Microfilm] (MIRA 10:5)

(Chemical apparatus) (Steel, Stainless)

KAGAN, I. Z.

USSR/Engineering - Welding, Methods 1951

"Automatic Welding of Stainless Steel Using Low-Carbon Electrode Wire Without Columbium," I. Z. Kagan, Engr

"Avtomat Svarka" No 1 (16), pp 55-60

Describes technology of welding stainless steels of 18-8 type under flux AN-20, developed by Inst of Elec Welding imeni Ye. O. Paton, using ordinary low-carbon wire without addn of columbium which promoted formation of hot cracks.

202152

KAZAN, I. E.

Electric Welding

Automatic welding of stainless steel pins. Avtom. svar. 4 No. 6, (21) 1951.

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

MR

K

434-K. Automatic Welding of Chemical Apparatus. (In Russian.) I. Z. Kagan. *Avtozashchita*, v. 22, Nov 1981, p. 24-26.
Welding practices. (K1, CN)

KAGAN, I. Z.

PA 19766

USSR/Metals - Steel, Welding

Apr 51

"Is the Presence of Columbium Necessary in Electrode Wire?" I. Z. Kagan, Engr, Plant Imeni Frunze

"Avtogen Delo" No 4, pp 26, 27

Expts revealed that addn of columbium to electrode wire is not justified in case of welding stainless steel 18-8 with 0.09-12% C. Its presence is even harmful since metal of welded joint loses its plastic properties and develops tendency to hot cracks. Low-carbon stainless wire gives good results in this case.

19768

USSR/Engineering - Welding, Methods

Oct 51

"Welding of Equipment Made of Nickel," I. Z. Kagan, Eng'r

"Artogen Delo" No 10, pp 24, 25

Discusses briefly effect of admixts, such as S, Mg, Mn, Fe, Si, C, Co and Pb, on weldability of ~~in~~ in shape of plates and describes procedure of welding by oxyacetylene process accepted at Soviet plants since 1938. Flux, without which welding of nickel is impossible, consists of boric acid, borax, chromous salts, barium peroxide, aluminum, ferrovanadium and ilmenite. Chem compn of N-1 by GOST 849-41 is given as follows: Ni + Co--99.5%

202T44

USSR/Engineering - Welding, Methods
(Contd)

Oct 51

min, Fe--0.25% max, C--0.10% max, Cu--0.10% max, S--0.02% max, and Si--trace. Tensile strength 38-44 kg/sq mm. elongation in annealed state 32-46%, BHN = 80-100.

202T44

KAGAN, I. Z.

KADAN, I. Z.

Welding

Voronenko, the welder-innovator; Avton, delo 3 no. 2, 1952

Monthly List of Russian Accessions, Library of Congress, May 1952. UNCLASSIFIED.

Welding

Section of the Scientific Institute of the Society of Welding Engineers and Technicians
at the Frunze plant. Avtor. delo 23, no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

1. HADAN, I. Z.
2. USSR (600)
4. Oxyacetylene Welding, and Cutting
7. M. N. Parkhomenko, the innovator-gas welder. Avtlog. delo 23, No. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

1. KAGAN, I. M.
2. USSR (600)
4. Bondarenko, P. L.
7. Experience of P. L. Bondarenko, the Stakhanovite gas welder. Avtog. delo 23
No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

USSR/ Engineering - Cold welding

Card 1/1 Pub. 128 - 15/26

Authors : Sineok, Ya. Ya.; Baranov, M. S.; Pankul, L. A.; Shapiro, L. S.;
Kagan, I. Z.; Glukhov, P. A.; Mikhin, V. N.; and Karpichev, A. S.

Title : The cold welding of crude iron

Periodical : Vest. mash. 2, 68-71, Feb 1954

Abstract : In order to familiarize and draw the attention of readers to the pressing problems of cold welding (soldering) of crude iron, the Editorial Office published several articles in which various methods of cold welding are discussed, and a description is given of the operations performed and the type of electrodes and equipment used for the above mentioned purpose. Table; drawings; illustrations.

Institution: :

Submitted :

SOV/137-59-3-5958

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 144 (USSR)

AUTHOR: Kagan, I. Z.

TITLE: Automatization of Gas-cutting Operations
(Avtomatizatsiya protsessov gazovoy rezki)

PERIODICAL: Prom. ekon. byul. Penzensk. sovnarkhoza, 1958, Nr 1, pp 30-32

ABSTRACT: A report on the performance of machines for O₂ cutting at the "Penzkhimmash" plant. The employment of hinge-joint machines of the ASSh-2 type in cutting of spokes (65 mm thick) and sectional screens (5 mm thick) made it possible to eliminate operations of planing and milling of these components and resulted in a 40-80% reduction in the amount of labor required for their manufacture. At cutting speeds of 100-650 mm/min a cutting accuracy up to 0.3 mm may be achieved. In executing straight cuts with the aid of a compass, as well as in manual cutting along template lines, portable equipment of the types PL-1 and PP-1 is employed which makes it possible to perform vertical and inclined cuts at an angle of 40° (chamfering of edges prior to welding); cuts thus obtained require no subsequent labor-consuming planing on edge-planing machines.

Card 1/2

SOV/137-59-3-5958

Automatization of Gas-cutting Operations

Approximately 120,000 rubles are saved annually as a result of the mechanization of gas-cutting operations at the plant.

G. K.

Card 2/2

AUTHOR: Kagan, I. Z., Engineer

135-58-8-13/20

TITLE: The Air-Arc Cutting of Stainless Steel (Vozdushno-dugovaya rezka nerzhavayushchey stali)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 8, p 41 (USSR)

ABSTRACT: The article describes a new method of air-arc cutting stainless acid-proof steel (17 to 20% chromium, 8 to 10% nickel and 2 to 3% molybdenum content), as used at the Penzkhimmash plant for the production of chemical industry equipment. It was developed by the plant together with VNIIAvtogen in 1957. Conventional methods of gas-cutting cannot be applied to such steel because of the formation of heat resisting chrome oxides. The described method consists fundamentally in melting the metal by electric arc and simultaneously blowing off the liquid metal

Card 1/2

The Air-Arc Cutting of Stainless Steel

135-58-8-13/20

by an air jet. Details of the special cutting "RVD-1-57" torch design and the cutting operation are given. There is 1 table.

ASSOCIATION: Zavod Penzkhimmash (The Penzkhimmash Plant)

1. Stainless steel--Cutting methods

Card 2/2

9-3

TABLE I BOOK REFERENCES 807/359
 Kompleksnaya mekhanizatsiya i avtomatizatsiya proizvodstva: iz opyta savsozheniya
 Penezhskoye sovetskoye. (Overall industrial mechanization and automation: from
 the experience of factories under the Penezhskaya Council of the National Economy)
 [Penza] Penezhskoye knizhnoye izdatel'stvo, 1973. 230 p. Illustrations included.
 2,000 copies printed.

Ed.: V. Yezhov; Tech. Ed.: Ye. Yezhovskaya.
 PURPOSE: This collection of articles is intended for the general reader interested
 in the mechanization and automation of machine-tool production.
 CONTENT: The efforts of industrial workers of the Penezhsk district to fulfill
 the objectives set forth in the Seven Year Plan for the development of the
 machine-tool industry are described in these 11 articles. The need for complete automation in the production of
 machine tools and instruments is strongly emphasized. No specialities are
 mentioned. There are no references.

TABLE OF CONTENTS:

MECHANIZATION PROCESS EQUIPMENT

Yakovlev, V.S. [Engineer]. Integral Control of Metal-Cutting Machine Tools	90
Yakovlev, A.I. [Candidate of Technical Sciences]. Pneumohydraulics and the Automation of Machine Tools in Small-Tool Production	110
Yakovlev, P.I. [Engineer] (see Comments - an important link in the complete mechanization and automation in machine manufacturing)	118
Yakovlev, P.I. [Engineer], V.M. Zhuravskiy [Engineer], and A.V. Priglas [Engineer]. Automation of Work in the Planning Department of a Foundry Section	132
Comments: I.A. [Candidate of Technical Sciences], and E.A. Kuznetsov [Engineer]. Method of Processing Parts Designed According to the Type of Operation Should Be Used at Local Plants	169
Khachatryan, I.S., and V.P. Khachatryan on the Road of Technical Progress	200
Kulayev, A.I. [Candidate of Chemical Sciences]. Raise the Level of Metallurgical Processes, Machine Metal Parts	217
Polyakov, A.I. [General of Army and Technical School Workers of Communist Labor Should Get Constant Professional Technical Assistance	221
AVAILABLE: Library of Congress	

VI/rev/may
 9-11-70

Card 3/3

KAGAN, I.Z.

The NVV-1,000 centrifuge for the dewatering of coal. Biul.tekhn.-
ekon.inform. no.12:7-9 '60. (MIRA 13:12)
(Centrifuges)

KAGAN, I.Z., inzh.

Technological Conference on Welding in the City of Penza.
Svar. proizv. no.9:43 S '61. (MIRA 14:8)
(Welding—Congresses)

KAGAL, A. V.,

... file and technical seminar on "Efficient planning of
... structures." Sver. proizv. no. 6:43-44. Je '65.

Lecture on "Gas electric welding of carbon, stainless, and
conformable metal" held in Penna. Ibid.:15 (PMA 18:3)

L 1724-66 ENT(d)/ENT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(x)/EWP(b)/
 EWP(l)/EWA(c) TUP(c) MJW/JD/HM UR/0123/65/040/008/0046/0030
 ACCESSION NR: AP3021224 621.791.7:359.66.05

AUTHOR: ^{44,55}Gurevich, S. M. (Doctor of technical sciences);
 Volkov, V. B. (Engineer); ^{44,55}Kagan, I. Z. (Engineer); ^{44,55}Semernya, I. A. (Engineer)

^{44,55}TITLE: ^{44,55}Welding of titanium chemical equipment

^{44,55}SOURCE: ²⁷Avtomaticheskaya svarka, no. 8, 1965, 46-50

TOPIC TAGS: titanium, titanium alloy, titanium welding, alloy welding, submerged
 arc welding, ¹⁸electroslag welding/¹⁸VT1 ¹⁸titanium, ¹⁸OT4 ¹⁸titanium alloy

ABSTRACT: The technology for submerged arc and electroslag welding of VT1 commercial-
 grade titanium and OT4 [U.S. RS110B] titanium alloy (the basic building materials for
 chemical equipment in the Soviet Union) is described. The technology, developed for
 the most part at the Electric Welding Institute im. Ye. O. Paton, ensures high-quality
 joints in parts working in aggressive media. Although electroslag and manual
 argon shielded arc welding are also used, automatic submerged arc welding is the
 basic technological process for welding longitudinal and circumferential joints in
 the fabrication of the components of filters, mixers, saturators, and other chemical
 equipment. An AN-T1 flux is used for welding titanium 8-10 mm thick; a higher

Card 1/3

L 1724-66

ACCESSION NR: AP5021224

melting and less fluid AN-T3 flux is used for heavier sections. A universal AN-T7 flux, the substitute for all previously used fluxes, was developed in 1961. VT1 titanium electrode wire was used in welding both VT1 titanium and OT4 titanium alloy. The welding is done with direct current and standard welding equipment. Prior to welding, rolled, extruded, or forged components are shot-blasted, pickled for 4-8 min in a solution (350 cm³ HCl, 650 cm³ water, and 50g sodium fluoride) at 50-60C, and degreased. For sections up to 14-16 mm thick, a square butt joint is used; for heavier sections, a V-joint with a 90 deg angle. Parts 30-35 mm thick are joined in several passes under an AN-T7 flux. For short welds, copper or steel back-up bars provide sufficient protection. However, argon backing must be used in welding long joints. Heavy rings, flanges, and similar parts are welded by the electroslog method. At the "Progress" plant (Berdichev, USSR), flanges 2260 mm in diameter consisting of seven forged VT1 segments (135 x 135 mm), and rings 800 mm in diameter from 60 x 120 mm VT1 forgings, have been successfully electroslog welded in a copper, water-cooled mold with an AN-T2 oxygen-free flux in an argon atmosphere. Titanium electrode wire is annealed in a vacuum of 10⁻⁴ mm Hg at 800-850C to reduce the hydrogen content below 0.004% and thus to prevent cold cracking of the weld metal. The oxygen content in the wire should not exceed 0.10-0.12%. Dense, sound welds are usually obtained with a strength and corrosion resistance roughly

Card 2/3

L 1724-66

ACCESSION NR: AP5021224

equal to those of the parent metal, and also with a satisfactory ductility and toughness. Orig. art. has: 4 figures and 4 tables. 10
16 [MS]

ASSOCIATION: Institut elektrosvariki im. Ye. O. Patona AN UkrSSR (Electric Welding Institute, AN UkrSSR); Penzenskiy filial NIIkhimmash (Penza Department of the NIIkhimmash); Berdichevskiy zavod "Progress" (Berdichev plant "Progress")

SUBMITTED: 44,55 06Mar65

ENCL: 00

44,55
SUB CODE: 44M

NO REF SOV: 003

OTHER: 000

ATD PRESS: 4096

Card 3/3

KAGAN
KUTILOV, I.I.; KAGAN, L.D.

What is the result of the misuse of economic accountability. Kona.
1 ov. prom. 13 no.1:33 Ja '58. (MIRA 11:2)

1. Yeyskiy konservnyy zavod.
(Canning industry--Accounting)

KAGAN, L.D.

Ways for eliminating seasonal work in the Adyge Canning Combine.
Kons. i ov. prom. 18 no.8:34-35 Ag '63. (MIRA 16:8)

1. Adygeyskiy konservnyy kombinat.
(Adyge Autonomous Province---Canning industry---Management)

VAYNSHTEYN, B.P.; KRUGLIKOV, V.Ya.; RAPOPORT, I.B.; VASIL'YEVA, Z.A.;
KAGAN, L.Kh.; PLOKHINSKAYA, Ye.A.; VOLYNSKIY, A.V.; MUZOVSKIY,
V.V.; KLEVTSOVA, V.P.; Primali uchastiye: MICHAN, A.I.;
KONOVAL'CHIKOV, L.D.; AYNShTEYN, V.G.; KVASHA, V.B.; CHELYANOVA,
D.P.; ZAYTSEVA, A.F.; ANDREYEVA, T.A.

New way to synthesize oxygen compounds from carbon monoxide
and hydrogen over iron-copper catalysts. Trudy VNII NP no.
9:177-196 '63. (MIRA 17:6)

VAYNSHTEYN, B.P.; KAGAN, L.Kh.; RAPOPORT, I.B.; KRUGLIKOV, V.Ya.;
KAPKIN, V.D.

Hydrogenation of some oxygen-containing compounds over precipitated
iron-copper catalysts. Neftekhimia 2 no.1:100-105 Ja-F '62.
(MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.
(Hydrogenation) (Catalysts)

KAGAN, L.Kh.; KLYACHKO-GURVICH, A.L.; RAPOPORT, I.B.; ZUBINSKIY, A.M.

Effect of the conditions of the reduction of iron-copper catalysts on their physicochemical properties. Khim. i tekhn. topl. i masel 10 no.3:14-16 Mr '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

KAGAN, L.M.

USSR.

✓ Recovery of dichloroethane from its aqueous solution. *Zh. Prikl. Khim.* 1954, 27, 1084-1085. The authors L. S. G. and L. M. Kagan, and V. P. Rodionova. The saturated solution is distilled, collecting the heterogeneous, b.p. 72° (91.6% dichloroethane (I)). In the fractions coming over at 71 to 72°. The distillate stratifies on cooling and the liq. layer is returned to the process. The residue of b.p. 68° is discharged as effluent. Hydrolysis of I is not observed during 1 hr. of boiling of neutral, but not of alkaline, solution. R. D. Jones

4
JAC

MIKHAYLOVSKAYA, Ye.I.; KAGAN, L.M.

Chemical composition and nutritive value of some fowl concentrates.
Kons. i ov. prom. 15 no.6:18-19 Ja '60. (MIRA 13:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.
(Food, Concentrated)

KHAKHINA, L.P.; USKOVA, L.S.; KAGAN, L.M.

Objective method for evaluating the coloring of potato chips.

Kons. i ov.prom. 18 no.9:37-38 S '63.

(MIRA 16:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut konservnoy i
ovoshchesushil'noy promyshlennosti.

(Potato chips—Testing)

BESKIN N.M. (Moskva); KOTOK, A.A. (Grodno); STRELETSKIY, E.Y. (Grodno);
ELISH, G.M. (Baku); KAGAN, L.S. (Baku); KUDILEV, Ya.I. (Ufa).

"Geometry textbook" by N.N. Nikitin, A.I. Fetisov. Reviewed by
N.M. Beskin and others. Mat. v shkole no.4:57-69 S-O '57.

(Geometry) (MIRA 10:8)
(Nikitin, N.N.) (Fetisov, A.I.)

GOLOVINOV, M.F.; AYUPOV, R.N.; KAGAN, L.S.; LESHKEVICH, G.G.; KURBATOV, V.I.;
KALUGIN, A.A.

Extrusion of pipe of varying cross sections. TSvet. met. 36
no.8:72-75 Ag '63. (MIRA 16:9)
(Extrusion (Metals)) (Pipe, Aluminum)

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1

SECRET

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1"

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1

Card 1/5

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1"

table, and 1 formula.

ASSOCIATION. Vsesoyuznyy nauchno-issledovatel'skiy institut burovoy tekhniki

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1"

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1



APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1"

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1"

Fig. 2.

Pressing of front thickening

Fig. 2.

Pressing of back thickening

Fig. 4. Device for processing drill pipes with two external thickenings.

the supporting ring; the guiding pipe

Card 5/5

IODAS, V.O.; KAGAN, L.V.; LINDER, V.B.; NARUZHNYI, B.V.

Oscilloscopic attachment for the electrocardiograph. Med. prom.
14 no. 10:48-49 0 '60. (MIRA 13:10)

1. Mediko-instrumental'nyy zavod "Krasnogvardeyets".
(OSCILLOGRAPH) (ELECTROCARDIOGRAPH)

KAGAN, M.

I. Palekha's crew. Stroitel' no.4:12 Ap '58.

(MIRA 11:5)

1.Nachal'nik otдела truda zarobotnoy platy tresta No. 87.
(Kharkov--Building)

KAGAN, M., doktor tekhn.nauk; PEREL'MAN, inzh.

Pressure of grain on granary walls. Muk-elev.prom. 25 no.1:17-20
Ja '59. (MIRA 12:3)

1. Moskovskiy inzhenerno-stroitel'nyy institut imeni V.V.Kuybysheva (for
Kagan). 2. Moskovskiy inzhenerno-ekonomicheskoy institut imeni S.
Ordzhonikidze (for Perel'man).
(Grain--Storage)

GUKAYLO, Mikhail Yakovlevich; MOZES, Ye.M., inzh., retsenzent; KAGAN,
M.A., inzh., red.; SOROKA, M.S., red.

[Basic principles in designing optical control and adjustment
instruments] Osnovnye printsipy konstruirovaniia opticheskikh
kontrol'no-ustirovochnykh priborov. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit.lit-ry, 1959. 124 p. (MIRA 12:7)
(Optical instruments)

Category: USSR / Physical Chemistry - Kinetics. Combustion.
Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30047

Author : I. Korniyenko V. P., Petrenko V. V.; II. Korniyenko V. P., Kagan
M. B., Spendiarov N. N.; III, Korniyenko V. P., Selikhova M. N.,
Remmer N. S.

Inst : Khar'kov University

Title : I. Thermal Decomposition of Nickel Oxalate. II. Kinetics of Thermal
Decomposition of Manganese Oxalate. III. Thermal Decomposition of
Cobalt Oxalate.

Orig Pub: Uch. zap. Khar'kovsk. un-ta, 1956, 71, 77-87; 89-94; 95-102.

Abstract: I. A volumetric study of the kinetics of decomposition of dihydrate
of nickel oxalate (I) at 343-369°. It is shown that the equation of
Yerofeyev (1) is applicable to this process. The exponent n appear-
ing in this equation is equal to 1 at low temperatures, increasing
with temperature and reaching 1.66 at 369°. With rise in temperature
the velocity maximum is shifted to 50% decomposition. Energy of acti-

Card : 1/3

-20-

Category: USSR / Physical Chemistry - Kinetics. Combustion.
Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30047

vation (E), calculated from temperature dependence of velocity constant, is 42.3 kcal/mole; from temperature dependence of the duration of the reaction, is derived the value $E = 45.3$ kcal/mole. Decomposition of I occurs in stages: 1) $\text{NiC}_2\text{O}_4 = \text{NiO} + \text{CO} + \text{CO}_2$; 2) $\text{NiO} + \text{CO} = \text{Ni} + \text{CO}_2$. By approximate thermodynamic calculations it is shown that the decomposition of I with formation of metal oxide and acid anhydride is more advantageous, from energy standpoint, than the decomposition to metal and radical. By means of the rule of Luginin the heat of formation value of I has been estimated and was found to be of 206 kcal.

II. A study was made, between 369 and 420°, of the thermal decomposition of the dihydrate of manganese oxalate (II). Decomposition of II takes place according to equation (1), in which the value of exponent n varies from 1.07 to 1.42, depending on temperature and percentage of decomposition. Energy of activation, $E = 41$ kcal/mole,

Card : 2/3

-21-

5(4)

SOV/76-33-9-8/37

AUTHORS:

Palatnik, L. S., Vinogorov, G. R., Kagan, M. B.,
Kuropyatnik, V. E.

TITLE:

Investigation of Heterogeneous Multicomponent Systems With the
Aid of the Phase Mass Measuring Method. I

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 9, pp 1939-1944
(USSR)

ABSTRACT:

The equilibrium in the liquid heterogeneous multi-component systems was investigated and the corresponding state diagrams were plotted. A new method was worked out resting on the determination of the mass of the various components and the phase masses in equilibrium. Several publications are cited in the introduction concerning the investigation of liquid multi-component systems, and the following authors are mentioned among others: V. V. Udovenko, L. G. Fatkulina, D. F. Belotskiy, M. L. Krupatkin. Several investigations were performed to fix the proper method of phase mass determination and the following was chosen: In order to separate the mixture a container with acute base is used (Fig 1) in which (down to the base point) a special pipette is dipped with one end of the

Card 1/3

SOV/76-33 9-8/37

Investigation of Heterogeneous Multicomponent Systems With the Aid of the Phase Mass Measuring Method. I

capillary tube so that phase separation is possible down to a small drop. The weight was determined with the aid of a precision balance (with damper). The fluid was sucked off with a glass syringe. The weight of the sucked off liquid layer is determined by weighing the fluid remaining in the container and by the difference from the initial weight. In order to determine the position of the solubility curve (binodal curve) of a ternary system the method of isothermic titration of a two-component mixture by a third component was applied. The position of the conodes was graphically determined. The applicability of the described method was investigated in the system aniline-carbon tetrachloride-n-heptane for simultaneous bromometric determination of aniline in its various phases (Table 1). As shown by the method the phase composition may be determined up to an accuracy of 0.2%. Further the systems water-methanol-dichloroethane, water-isopropanol-dichloroethane were investigated (Ref 2); (Tables 2,3) as well as the system aniline-chloroform-n-heptane, that separates into two layers and that was not hitherto investigated, were investigated at $18 \pm 0.5^\circ$. It was observed that chloroform is equally distri-

Card 2/3

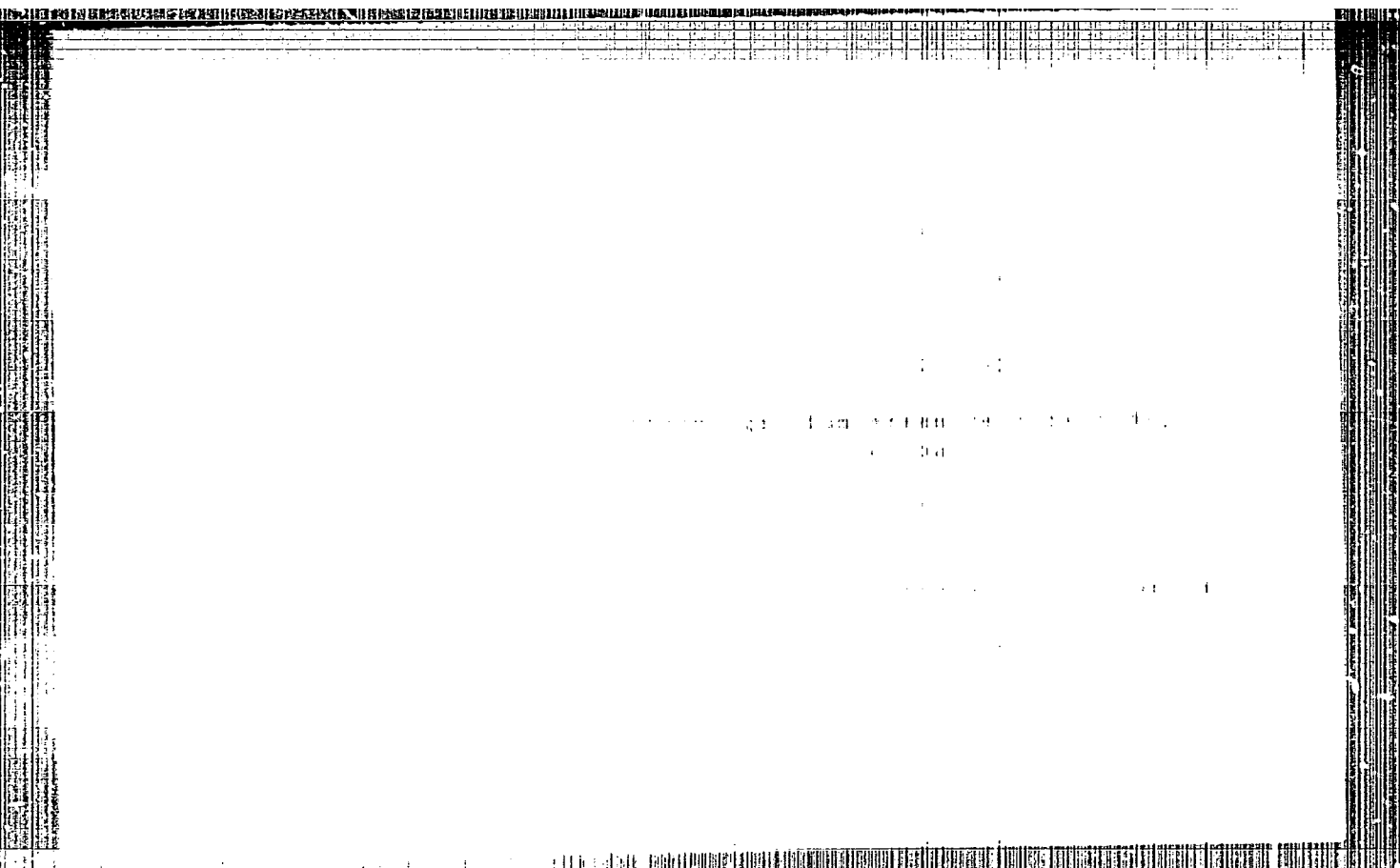
SOT/76-33-9-8/37

Investigation of Heterogeneous Multicomponent Systems With the Aid of the Phase Mass Measuring Method. I

buted in both layers. The critical solution contains 36.4% aniline, 29.8% chloroform and 33.8% n-heptane. There are 5 figures, 5 tables, and 28 references, 6 of which are Soviet.

SUBMITTED: February 19, 1958

Card 3/3



ACCESSION NR: AP4044941

... crystal was a GaAs single crystal with a lattice
... mobility of 3000 cm²/v-sec. The
... after a 1000°C anneal in
... the sample was
... the sample was
... the sample was

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619910013-1"

L 57453-65 EWT(m)/T/EAF(t)/EAF(b)/EAF(c) IJP(c) 70/10/69
 ACCESSION NR: AT5015797

UR/0000165 (DOC/0000165)

TOPIC TAGS: photocell, gallium arsenide photocell, silicon photocell, semiconductor photocell

ABSTRACT: The electrical, spectral, and temperature characteristics of GaAs photo-cells were studied. The results show that the GaAs photo-cells have a high quantum efficiency and a high spectral response. The results also show that the GaAs photo-cells have a high temperature stability and a high resistance to radiation damage. The results are discussed in terms of the physical properties of GaAs and the device structure.

Card 1/2

ACCESSION (R) AT-11111

(Laser of media 2000 x 2000) working area of 2.25 cm² developed in maximum power
of 100 W. The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².
The laser is a solid-state laser with a density of 100 W/cm².

ASSOCIATION: none

SUBMITTED: 12 Feb 65

ENCL: 00

SUB CODE: RM, SS

REF: 5 V: 001

OTHER: 001

AND PRESS: 4044

Card: 2 1

L 60976-65

AWA(h) / EMP (1) / EMP (2) / EMP (b) / T / EMP (t)

11-6 '00h

12-1 '00h

Card 1/3

19976_65

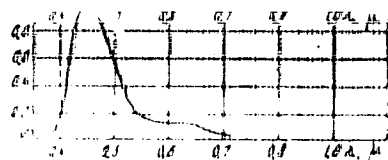


Figure 1. Spectral sensitivity of photoelements with various depths of penetration.

L 6337-66 EWT(m)/T/EWP(t)/EWP(b)/ENA(c) IJP(c) JD/JG

ACCESSION NR: AP5019882

UR/0181/65/007/008/2538/2539

AUTHOR: Gutkin, A. A.; Kagan, M. B.; Sedov, V. Ye.; Chernov, Ya. T.

TITLE: Effect of orientation of GaAs crystals on the depth and photoelectric properties of diffusion pn junctions

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2538-2539

TOPIC TAGS: gallium arsenide, pn junction, zinc, photoelectric cell, spectral distribution, photosensitivity

ABSTRACT: In view of some contradiction in earlier results (M. T. Minamoto and H. T. Malafi, J. Appl. Phys. v. 34, 1876, 1963) the authors have investigated the influence of orientation on the rate of diffusion of zinc by producing deep p-n junctions in plates having the same orientations as used in the preparation of photocells. The spectral distributions of the photosensitivity at photon energies 1.3--3 ev, of diffusion GaAs photocells which the authors produced under identical conditions, turned out to be practically the same, in spite of the fact that earlier results indicated that the position and form of the p-n junction should depend on the concentration and distribution of the dislocation. The initial material was single-crystal GaAs of n-type with electron density $(2--3) \times 10^{17} \text{ cm}^{-3}$ and mobility $3500--4000 \text{ cm}^2 \text{ v}^{-1} \text{ sec}^{-1}$ grown horizontally by the Bridgman method.

Card 1/2

07102-004

L 6337-66

ACCESSION NR: AP5019882

The treatment of the crystals is described. The results show that the thickness of the p-layer, and consequently the diffusion coefficient of the zinc, does not depend on the orientation. Addition of arsenic into the ampoule greatly reduces the diffusion coefficient of zinc. This result agrees with that of L. J. Vieland (J. Phys. Chem. Sol. v. 21, 318, 1961). Orig. art. has: 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad
(Physicotechnical Institute AN SSSR)

SUBMITTED: 20Mar65

ENCL: 00

SUB CORR: SS

NR REF SOV: 001

OTHER: 005

60
Card 2/2

AP6007743

SOURCE CODE: UR/0293/06/006/001/0128/0136

AUTHOR: Kagan, M. B.; Landsman, A. P.; Chernov, Ya. N.
ORG: none

ORG: none

TITLE: Analysis of spectral and thermal characteristics of photo-electric converters and the selection of effective areas of their application

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 1, 1968, 128-136

TOPIC TAGS: solar cell

TOPIC TAGS: solar cell, photoelectric cell, gallium arsenide, silicon
ABSTRACT: The spectral and thermal properties of GaAs-GaP

ABSTRACT: The spectral and thermal characteristics of GaAs and GaAs-GaP energy converters were studied and compared with those made of Si in order to determine the most advantageous fields of application of the respective materials as photovoltaic sources of space power. The fabrication procedures and the basic parameters of the samples used in the experiments were described in earlier papers (Cutkin, A. A., D. N. Nasledov, V. Ye. Sedov, and N. V. Tsarenkov, FTT, 4, 9, 1962, 2338; Kagan, M. B., and A. P. Landsman, Izpol'zovanie solnechnoy energii v narodnom khozyaystve, Izd-vo "Nauka," 965, p. 51; Kagan, M. B., A. P. Landsman, and Ya. I. Chernov, FTT, 6, 9, 1964, 2700). The effective area of the investigated GaAs cells was $1-1.5 \text{ cm}^2$.

Card 1/2

UDC: 621.383.4

Card 1/2

UDC: 621.383.5

ACC NR: AP6007743

and their efficiency at 20C was 7—9%; the efficiency of the variable-gap GaAs—GaP cells reached 6—7% at 200C. The measurements showed that while Si solar cells still appear to be the most suitable for the temperature range of +20—+80C and at normal solar illumination, at higher temperatures GaAs offers several advantages. The authors recommend the use of GaAs in the temperature range of +40—180C and in conjunction with solar concentrators. According to their calculations, a solar flux concentration by a factor of 4—6 can be achieved without the use of a cooling system. Variable-gap GaAs—GaP solar cells are recommended for use at temperatures above +200C. These cells are said to be able to withstand a solar flux concentration by a factor of 10—20 without the necessity of cooling. Orig. art. has: 6 figures, 2 tables, and 2 formulas. [2L]

SUB CODE: 10/ SUBM DATE: 29Dec64/ ORIG REF: 007/ OTH REF: 011
 ATD PRESS: 4216

Card 2/2 dic

L 08129-67 EWT(m)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6033579

SOURCE CODE: UR/0101/66/008/010/3097/3099

AUTHOR: Gutkin, A. A.; Kagan, M. B.; Magerramov, E. M.; Chernov, Ya. I.; Gutkin, A. A.
Kagan, M. B.; Magerramov, E. M.; Chernov, Ya. I.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-
tekhnicheskiy institut AN SSSR); All-Union Scientific-Research Institute of Current
Sources, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy institut istochnikov toka)

TITLE: Spectral characteristics of GaP--GaAs photocells in the photon energy region
up to 5.4 eV

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 3097-3099

TOPIC TAGS: gallium arsenide, gallium phosphide, gallium optic material, pn
junction, photoelectric cell, photosensitivity

ABSTRACT: This is a continuation of earlier work (Kosmicheskkiye issledovaniya, IV, 128, 1966 and preceding papers) where the possibilities of GaP--GaAs p-n junctions were first revealed and studied. The present paper describes investigations of the photosensitivity of junctions prepared by diffusion of zinc in a GaAs plate in which a region of variable composition $\text{GaP}_{1-x}\text{As}_x$ was produced beforehand by heating in phosphorus vapor. The preparation procedure and some properties of such a junction were described earlier. The illuminated surface was subjected to various degrees of

Card 1/2

L 08129-67

ACC NR: AP6033579

3

etching. The tests consisted of plotting the photocurrent spectra and the spectrum of the diffuse reflection from the surface. X-ray analysis of the junction structure, and the presence of a peak near 3.6 eV, reveal that the surface layer of the photocell contains not less than 90% of GaP and consequently its photosensitivity spectrum is governed by the band structure of GaP. Comparison of the reflection and photosensitivity spectra shows that the photocurrent per incident absorbed photon is constant (at $h\nu \sim 2.5-4.6$ eV) and then drops off slightly towards 5.4 eV. This is also confirms the GaP-type band structure, which precludes any possible increase of the quantum yield for photons with energy lower than ~ 5.2 eV, when the internal photoeffect and impact ionization come into play. The fact that the quantum yield remains constant over a wide range of photon energies extending over different parts of the Brillouin zone shows that the minority nonequilibrium carriers (electrons) excited by the photons in different parts of the conduction band have time to go over to the equilibrium state at room temperature within a time shorter than the carrier lifetime ($\leq 10^{-9}$ sec). Consequently the drop in photosensitivity in the 2.6-3.5 eV region, which decreases strongly when the cell surface is etched, may be due to an increased role of surface recombination with increasing absorption coefficient, and not to a decrease in lifetime. The authors thank A. S. Toporets, A. V. Sheklein, and N. B. Rekant for measuring the diffuse-reflection spectra. Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: 13Apr66/ ORIG REF: 007/ OTH REF: 005/

ATD PRESS: 5102

Card 2/2 nst

L 08129-67 EWT(m)/EWP(t)/ETA IJP(e) JD

ACC NR: AP6033579

SOURCE CODE: UR/0181/66/008/010/3097/3099

AUTHOR: Gutkin, A. A.; Kagan, M. B.; Magerramov, E. M.; Chernov, Ya. I.; Gutkin, A. A.
Kagan, M. B.; Magerramov, E. M.; Chernov, Ya. I.

ORG: Physicotechnical Institute im. A. P. Ioffe, AN SSSR, Leningrad (Fiziko-
tekhnicheskiy institut AN SSSR); All-Union Scientific-Research Institute of Current
Sources, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy institut istochnikov toka)

TITLE: Spectral characteristics of GaP--GaAs photocells in the photon energy region
up to 5.4 eV

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 3097-3099

TOPIC TAGS: gallium arsenide, gallium phosphide, gallium optic material, pn
junction, photoelectric cell, photosensitivity

ABSTRACT: This is a continuation of earlier work (Kosmicheskiye issledovaniya, IV, 128, 1966 and preceding papers) where the possibilities of GaP--GaAs p-n junctions were first revealed and studied. The present paper describes investigations of the photosensitivity of junctions prepared by diffusion of zinc in a GaAs plate in which a region of variable composition GaP As_(1-x) was produced beforehand by heating in phosphorus vapor. The preparation procedure and some properties of such a junction were described earlier. The illuminated surface was subjected to various degrees of

Card 1/2

L 08129-67

ACC NR: AP6033579

3

etching. The tests consisted of plotting the photocurrent spectra and the spectrum of the diffuse reflection from the surface. X-ray analysis of the junction structure, and the presence of a peak near 3.6 eV, reveal that the surface layer of the photocell contains not less than 90% of GaP and consequently its photosensitivity spectrum is governed by the band structure of GaP. Comparison of the reflection and photosensitivity spectra shows that the photocurrent per incident absorbed photon is constant (at $h\nu \sim 2.5-4.6$ eV) and then drops off slightly towards 5.4 eV. This also confirms the GaP-type band structure, which precludes any possible increase of the quantum yield for photons with energy lower than ~ 5.2 eV, when the internal photoeffect and impact ionization come into play. The fact that the quantum yield remains constant over a wide range of photon energies extending over different parts of the Brillouin zone shows that the minority nonequilibrium carriers (electrons) excited by the photons in different parts of the conduction band have time to go over to the equilibrium state at room temperature within a time shorter than the carrier lifetime ($\leq 10^{-9}$ sec). Consequently the drop in photosensitivity in the 2.6-3.5 eV region, which decreases strongly when the cell surface is etched, may be due to an increased role of surface recombination with increasing absorption coefficient, and not to a decrease in lifetime. The authors thank A. S. Toporov, A. V. Shekilein, and N. B. Rekant for measuring the diffuse-reflection spectra. Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: 13Apr66/ ORIG REF: 007/ OTH REF: 005/ ATD PRESS: 5102

Card 2/2 net

ACC NR: AP7002713

(A)

SOURCE CODE: UR/0115/66/000/012/0081/0082

AUTHOR: Berman, L. S.; Gliberman, A. Ya.; Kagan, M. B.; Landsman, A. P.

ORG: none

TITLE: Light-sensitive devices of silicon and gallium arsenide, based on barrier layer cells

SOURCE: Izmeritel'naya tekhnika, no. 12, 1966, 81-82

TOPIC TAGS: photovaricaps, photoelectric cell, silicon semiconductor, semiconductor device, gallium arsenide, arsenide, silicon compound, photosensitivity

ABSTRACT:

Semiconducting light-sensitive devices ("photovaricaps") based on barrier layer cells made of silicon and gallium arsenide single crystals and having low series resistance were developed and tested. The size of the photovaricaps ranged from 2 x 2 mm to 10 x 10 mm. The capacity for a unit of area for silicon photovaricaps without external voltage $C(0)$ was approximately 0.027 to 0.030 $\mu\text{F}/\text{cm}^2$, and for gallium arsenide photovaricaps 0.38 to 0.050 $\mu\text{F}/\text{cm}^2$. The photovaricaps can operate in a range of sonic and ultrasonic frequencies. The most important parameter of the photovaricaps is the photosensitivity coefficient characterizing the relative change of capacitance per unit of luminous flux Φ . The capacitance temperature coefficient for

Card 1/2

UDC: 621.383

ACC NR: AP7003153

SOURCE CODE: UR/0368/66/005/006/0770/0773

AUTHOR: Kagan, M. B.; Koltun, M. M.; Landsman, A. P.

ORG: none

TITLE: Reflection coefficient of highly-doped GaAs in the spectral range from 0.2 to 25 μ

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 6, 1966, 770-773

TOPIC TAGS: solid state laser, semiconductor laser, gallium arsenide, ~~laser material~~, ~~semiconductor~~, solar cell, light reflection coefficient, optic spectrum

ABSTRACT: Measurements of the regular-reflection coefficient are given for single-crystal p-type GaAs samples with Zn doping (for carrier concentration from 1.7 to $15 \cdot 10^{19} \text{ cm}^{-3}$), and n-type samples (for a carrier concentration of $3 \cdot 10^{15} \text{ cm}^{-3}$). An SF-4 spectrophotometer is used from 0.2 to 0.75 μ and an IKS-14 spectrophotometer from 0.75 to 25 μ . Several samples were chemically polished and their surface irregularities did not exceed 0.3 μ , while one sample had irregularities of about 1 μ and exhibited a lower reflection coefficient in the ultraviolet and optical region of the spectrum. In the optical region the carrier concentration has little influence on reflection properties. In the infrared, the reflective power increases considerably with free carrier concentration, while at the same time the minimum occurring at wavelengths where the index of refraction approaches unity is shifted

Card 1/2

UDC: 535.39

ACC NR: AP7003153

toward shorter lengths, approximately from 12 to 4 μ . The reflection coefficient can be brought down from 32 to 0.5—1.0% in any given part of the optical spectrum by SiO coatings of suitable thickness (0.21 μ), while MgF₂ and SiO₂ coatings (0.21 μ) are not as effective. Two methods of sharply reducing the reflection from highly-doped single crystals in the 3—25 μ region are discussed. One of these involves coating the surface with irregularities 10—30 μ thick and treating the same chemically; the other — coating the surface with a layer of organic silicon varnish 10—40 μ thick, highly absorbing in the infrared but transparent in the 0.4—1.0 μ regions. In the infrared region, use of silicon-based coatings can increase the thermal radiative power of GaAs surface (at 25°C) from 0.49—0.51 to 0.8—0.92. These coatings do not damage the surface, and good diffused junctions are still possible. One can expect that the use of the above procedures will considerably improve the performance of lasers and solar cells. Orig. art. has: 3 figures. [WA-14]

SUB CODE: 20/ SUBM DATE: 22Dec65/ ORIG REF: 001/ OTH REF: 002

Card 2/2

KAGAN, B.D., kand. ekon. nauk, SPEN, V Yu, 1961.

[Development of electric power engineering in the countries of the socialist camp; a survey] Razvitie elektroenergetiki stran sotsialisticheskogo lagernia: obzor. Moskva, Vses. in-t po proektirovaniu organizatsii energeticheskogo stroitel'stva, 1962. 83 p. (MLRA 17:7)

PALATNIK, L.S.; VINOGOROV, G.R. ; KAGAN, M.G.

Study of multicomponent heterogeneous systems by the phase
mass method. Part 2. Zhur. fiz. khim. 34 no. 11:2396-2404
N '60. (MIRA 14:1)

1. Khar'kovskiy gosudarstvennyy universitet.
(Systems (Chemistry))

KAGAN, M. I.

Kagan, M. I. "Cases of double innate luxation of the small head of the radius," Zdravookhraneniye, Sov. Latvii, 1948, Symposium 2, p. 112,-17

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949)

KAGAN, M. [1.]

USSR/Medicine - Pediatrics

Medicine - Lipoid Granulomatosis of the Bone Nov/Dec 48

"Problem of Xanthomatosis Generalisata Ossium," L. M. Linder, M. Kagan,
Pathoanat and Surg Dept, Hosp imeni Baukhfus, Leningrad, 4 pp

"Vop Ped i Okhran Mater i Det" No 6

Describes two cases of Schuller-Christian's disease in male children,
with three photographs.

PA 43/49T75

KAGAN, M.I.

Comparative evaluation of therapeutic methods in burns in children.
Vest.khir.Grekova 70 no.6:12-27 1950. (CINL 20:5)

1. Of the Department of Children's Surgery of Leningrad State Pediatric Medical Institute (Head of Department--A.V.Shatskiy) and of the Surgical Division of Children's Hospital imeni Raikhfus (Head Physician--E.M.Abkin). 2. Author deceased.

BOGOYAVLENSKAYA, L.B.; VIL'SHANSKAYA, F.L.; MATVEYKHA, V.H.; SAKHAROVA, P.K.;
KUZNETSOVA, Ye.V.; KAGAN, M.I.

Etiological structure of intestinal diseases of infants; author's
abstract. Zhur.mikrobiol.,epid.i immun. 30 no.11:113 N '59.

(MIRA 13:3)

1. Iz Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(INFANTS--DISEASES) (INTESTINES--DISEASES)

KAGAN, M.I.; YEREMIN, A.I.

Drying aspirin on drum-dryers. Med.prom. no. 4:13-16 O-11 '55.
(MLRA 9:12)

1. Moskovskiy salitsilovyy zavod
(ACETYLSALICYLIC ACID, preparation of
drying on drum-dryers)

KAGAN, Moisey Iosifovich

[Typhoid fever] Briushnoi tif. Moskva, Medgiz, 1960. 18 p.
(MIRA 13:12)

(TYPHOID FEVER)

KAGAN, M.I.; KUZNETSOVA, Ye.V.; VIL'SHANSKAYA, F.L.; BOGOYAVLENSKAYA, L.B.;
MATVEYEVA, V.N.; SAKHAROVA, P.K.

Epidemiological observations on patients with colienteritis. Zhur.
mikrobiol. i epid. i immun. 32 no.10:78-80 0 '61. (MIRA 14:10)

1. Iz Gorodskoy sanitarno-epidemiologicheskoy stantsii i sanitarno-
epidemiologicheskoy stantsii Dzerzhinskogo rayona Moskvy.
(ESCHERICHIA COLI) (INTESTINES--DISEASES)

BABICHENKO, S.I.; BOGDANOV, A.A.; GORN, L.S.; KAGAN, M.I.; KHYLOV,
L.N.; OL'DEKOP, L.G.; KHAZANOV, B.I.; MELESHKO, V.K., red.;
DRUZHININA, L.V., tekhn. red.; POPOVA, S.M., tekhn. red.

[Radiometric process instrumentation] Kontrol'no-izmeritel'-
naia radiometricheskaia apparatura. [By] S.I. Babichenko i dr.
Moskva, Gosatomizdat, 1963. 148 p. (MIRA 16:12)
(Radiometry)

1. 46684-66 ENT(1)/EWF(1)

ACC NR: AP6020734

SOURCE CODE: UR/0421/66/000/003/0129/0131

AUTHOR: Bunimovich, A. I. (Moscow); Kagan, M. L. (Moscow)

40 B

ORG: none

TITLE: Free-molecular flow of gas in flat channels and gratings

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 3, 1966, 129-131

TOPIC TAGS: gas flow, rarefied gasdynamics, free molecular flow

ABSTRACT: The grating in question is assumed to be made up of thin ideally-heat-conducting elements whose dimensions are smaller than the mean free paths of the molecules in the rarefied gas. These molecules are assumed to have a Maxwellian velocity distribution. The authors calculate the number of molecules incident on each grating element directly and as a result of reflection from other elements, and determine from this calculation the aerodynamic characteristics of the gas flow (force acting on grating). The flow in a flat channel and the flow around a grating made up of flat plates are obtained as limiting cases of the general calculations. Orig. art. has: 3 figures and 16 formulas.

SUB CODE: 20/ SUBM DATE: 13May65/ ORIG REF: 002/ OTH REF: 002

Card 1/1

Plasterin:

Application of sectionalized production-line methods to plastering.

Stroil. tekhn., 7, no. 1, 1952

Inzh.; Minmashstroy, Trest no. 22

SO: Monthly List of Russian Accessions, Library of Congress, April² 1953, Uncl.

24(7) PHASE I BOOK EXPLOITATION 80V/100

L'ov. Universitet

Materialy I Vsesoyuznogo soveshaniya po spektroskopii, 1956.
t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union
Conference on Spectroscopy, 1956, Vol. 2: Atomic Spectroscopy)
Izdatel'stvo L'vovskogo univ., 1958. 568 p. (Series: Ita;
Viznitskiy sbornik, vyp. 4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po
spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.);
I.E. Kopylov, Doctor of Physical and Mathematical Sciences;
V.M. Pavlyutsky, Doctor of Physical and Mathematical Sciences;
V.B. Koritskiy, Candidate of Technical Sciences, S.M. Kuznetsov,
Candidate of Physical and Mathematical Sciences, L.K. Kuznetsov,
Candidate of Physical and Mathematical Sciences, V.S. Kilyanchuk
(deceased), Doctor of Physical and Mathematical Sciences; A.Ye.
Ginsburg, Doctor of Physical and Mathematical Sciences;
Ed.: S.L. Gaser; Tech. Ed.: T.V. Serebryak.

PURPOSE: This book is intended for scientists and researchers in
the field of spectroscopy, as well as for technical personnel
using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies
of atomic spectroscopy presented at the 10th All-Union Confer-
ence on Spectroscopy in 1956. The studies were carried out by
members of scientific and technical institutes and include
extensive bibliographies of Soviet and other sources. The
studies cover many phases of spectroscopy: spectra of rare earths,
electromagnetic radiation, physicochemical methods for controlling
uranium production, physical and technology of gas discharge,
optical and spectroscopic absorption, diaphragm spectroscopy,
spectroscopy and the combustion theory, spectrum analysis of ores
and minerals, photographic methods for quantitative spectrum
analysis of metals and alloys, spectral determination of the
hydrogen content of metals by means of isotopes, tables, and
atlases of spectral lines, spark spectrographic analysis,
statistical study of variation in the parameters of calibration
curves, determination of traces of metals, spectrum analysis in
metallurgy, thermochemistry in metallurgy, and principles and
practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.)	80V/100
Gaydel', A.M., A.A. Petrov, and K.I. Fedrov. Spectral Determination of Hydrogen in Metals by the Isotope Balance Method	206
Burgess, W.A., G.V. Verzhbitskiy, A.N. Gaydel', and A.A. Petrov. Isotope Spectrum Analysis of Hydrogen-Deuterium Mixtures	207
Avramitskiy, M.J., and K.I. Tiganov. Studies on the Spectral Determination of Hydrogen in Metals	209
Vidre, G.I., B.D. Luf, and Yu. V. Matorin. Use of Gas- Discharge Devices as Light Sources in the Spectrum Analysis of Inert Gases	212
Bozhova, O.P., and L.P. Rykova. Spectrum Analysis of Multicomponent Gas Mixtures	213
Buravskiy, I.B., and S.A. Sotnikov. Unit for the Analysis of Nitrogen in Metals and the Analysis of Gas in Small Samples	217
Plimenov, L.M., and E.M. Kagan. Spectral Analytic Determina- tion of Carbon and Nitrogen in Titanium	222

Card 18/31

RYBCHINSKAYA, K.M. [Rybehyns'ka, K.M.], kand. med. nauk; KAHAN, M.R.
[Kahan, M.R.]

Effect of combined mud therapy on the activity and properties
of catalase in gynecological patients. Ped. akush. i gin. 24
no.6:50-52 '62. (MIRA 17:4)

1. Biokhimicheskaya laboratoriya Ukrainskogo instituta
kurortologii i fizioterapii (direktor - dotsent F. Ye.
Kurkudim [Kurkudym, F.IE.]) i Lermontovskiy sanatoriy.